

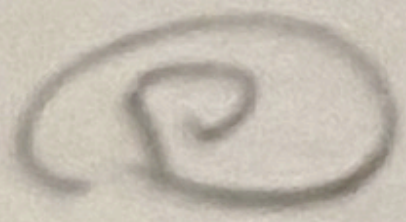
HOOVER INSTITUTION ARCHIVES

EDWARD TELLER

ARCHIVAL MEDIA

BOX NO. 541

76074- B10.025.01 . F



1966-1968

1964-1968

1969-1977

1968-1995

USAF : SAB

1958-1965

USAF : SAB

1956-1957

USAF : SAB

1952-1955

USAF : SAB

EDWARD TELLER

1)SAF: SAB

1956-1957

EDWARD TELLER

USAF : SAB

1956-1957

History of U.S. Air Force, 1907-57.

A. Goldberg

Chapter 20

THE TOOLS

Weapons

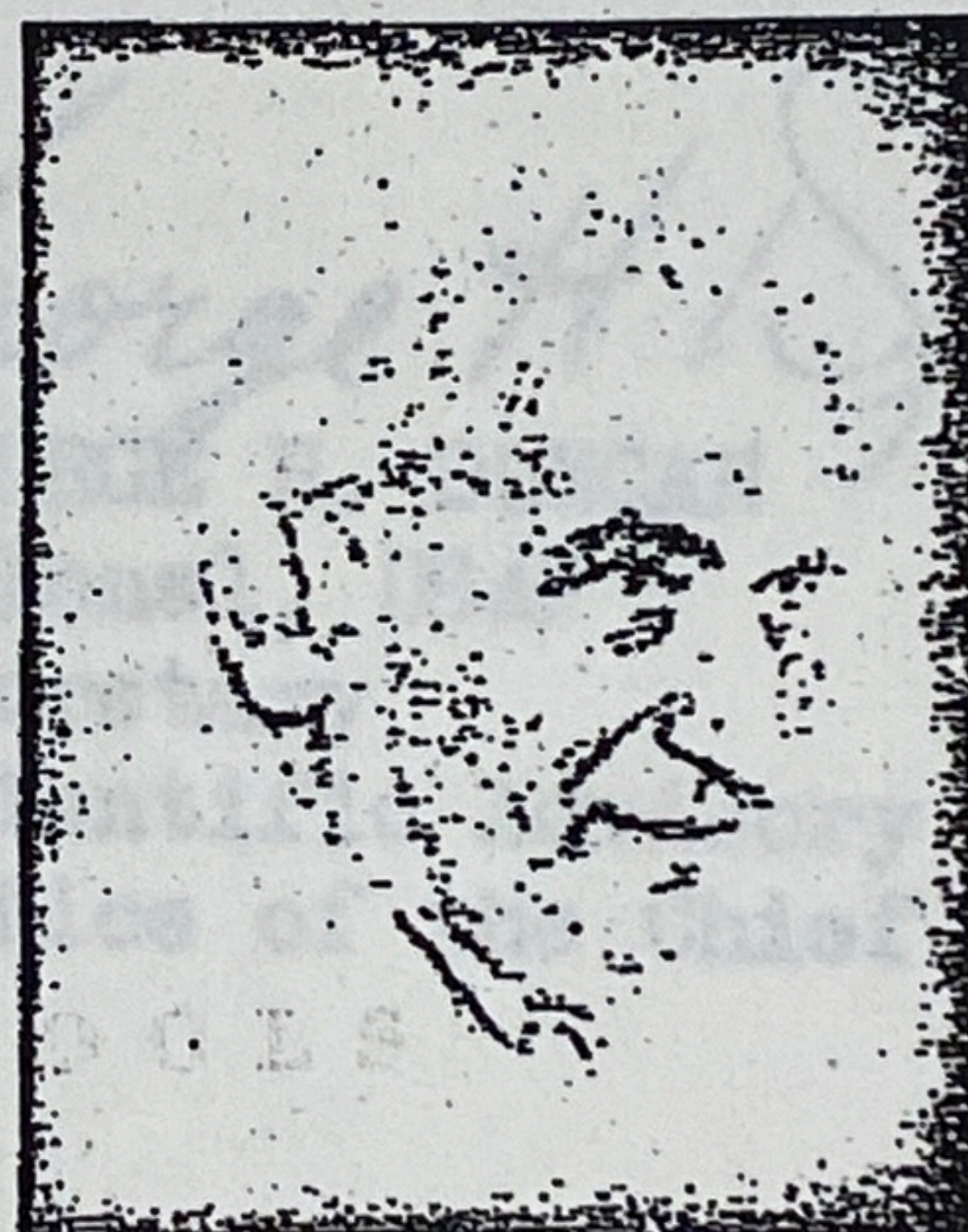
FROM the bow and arrow to the thermonuclear bomb, weapons have shaped the ways of war, and superior weapons have often meant the difference between victory and defeat. As warfare became increasingly mechanized, the military man came to rely more and more upon the scientists for newer and better tools of war. In the mid-twentieth century this quest for new weapons produced a revolution in the art of war, and particularly in the art of air war, that had fateful implications for all mankind.

Research and Development in the Air Force

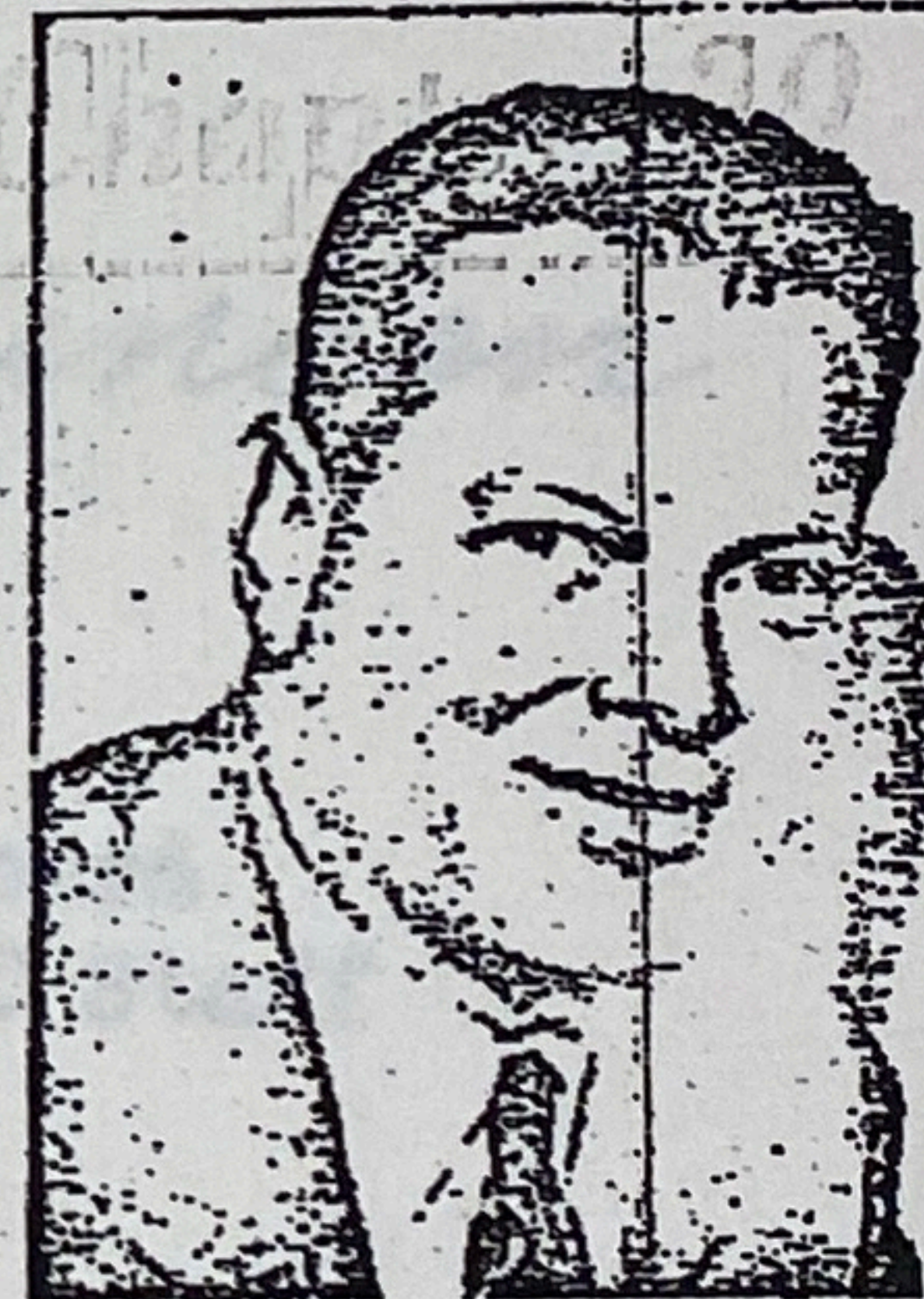
In World War II the American scientist played a far more influential role than in any previous conflict. Nevertheless, the United States often took calculated risks during the war by subordinating research and development to mass production. Looking ahead, the Army Air Forces hoped to strike a better balance between quantity and quality in the postwar period. During the closing months of the war, Dr. Theodore von Karman, world-renowned aerodynamicist, headed a committee of scientists who analyzed the achievements of the warring powers and concluded that science had become the key to aerial supremacy. But it took time to give research and development the high priority that the scientists wanted.

In the debate over organization, supporters of the *status quo* argued that Air Materiel Command should retain responsibility for research and development as well as for procurement and production. They believed that these activities were so intertwined that separation would be ruinous. Proponents of change replied that AMC could not concentrate on the weapons of tomorrow because it was absorbed in current production.

In 1949 a group of scientists, headed by Dr. Louis N. Ridenour, and a group of military experts at Air University both recommended that USAF research and development activities be concentrated under a separate command. The Air Force then decided to disentangle the scientific from the logistical and set up a direct line of



Dr. Theodore von Karman set the Research and Development pattern.



Dr. Louis N. Ridenour recommended an R&D command.

authority for scientific matters. In January 1950 it created the office of the Deputy Chief of Staff, Development, in Headquarters USAF to provide top-level staff supervision of all research and development. At the same time it established a single agency, the Air Research and Development Command (ARDC), to carry out the research and development programs. But ARDC did not actually take over control of the function until April 1951. In the summer of 1951 it moved from Wright-Patterson AFB to Baltimore, Md.

Research and development also received recognition at the Secretarial level. On March 1, 1955, Trevor Gardner, an experienced engineer and administrator, became the first Assistant Secretary of the Air Force for Research and Development. Gardner, who had served as a special assistant to the Secretary for research and development matters from 1953 to 1955, resigned in February 1956 because of a disagreement with the Secretary of Defense over the priorities given the Air Force guided missile program. Richard E. Horner was appointed to fill the vacancy in June 1957.

The success or failure of the new organization rested upon the quality of the new weapons and the speed of their development. Planning in terms of weapon systems,

Boeing Bomarc IM-99 interceptor missile roars straight up in test at AF Missile Test Center, Patrick AFB, Fla.

~~SECRET~~

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

O ABE BT-18-57

22 November 1957

MEMORANDUM FOR NUCLEAR PANEL MEMBERS AND CONSULTANTS

SUBJECT: Scientific Advisory Board Report "Future Nuclear Weapons"

1. Attached for your information is a memorandum, dated 7 November 1957, to the Chairman of the Scientific Advisory Board, subject as above, from the Office of the Deputy Chief of Staff, Development.

2. It is suggested you pass your thoughts on the recommendation in Paragraph 2 of the memorandum to Dr. Plesset, who can then advise the Secretariat of panel plans in this respect.

George H. Duncan

GEORGE H. DUNCAN
Colonel, USAF
Secretary
Scientific Advisory Board
Office of the Chief of Staff

1 Incl
Memo of 7 Nov 57
fr DCS/D to Ch, SAB

*Returned
to SAB
3/18/58*

MEMBERS

Edward Teller
David T. Griggs
M. G. Holloway
J. Carson Mark
Mark M. Mills
Ernst H. Plesset
Herbert Scoville, Jr.

CONSULTANTS

Harold Agnew
Harold Brown
John S. Foster
Albert L. Latter
Ernest Martinelli
James W. McRae

When inclosures are removed or not attached, this correspondence will be declassified in accordance with Par. 37h, AFR 205-1.

~~SECRET~~

This document consists of 2 pages.
Copy Number 1 of 13 copies.

BE BT-1-57 (I)

~~SECRET~~

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

12 February 1957

MEMORANDUM FOR DR. EDWARD TELLER ✓
MR. DAVID T. GRIGGS
DR. HERBERT SCOVILLE, JR.
DR. JAMES McRAE
DR. JOHN FOSTER
DR. HAROLD BROWN
DR. MARK M. MILLS
DR. J. CARSON MARK
DR. ALBERT L. LATTER

SUBJECT: Nuclear Panel Report

1. Attached for your comment is the proposed Nuclear Panel Report on Kill Criteria
2. Please advise us of your thoughts on this draft at your earliest convenience.

*Returned to SAB
3/18/58*

for B.C. Gray, Lt Col USAF
FLOYD J. SWEET

Lt. Colonel, USAF

Secretary

Scientific Advisory Board

Office of the Chief of Staff

INCLOSURE

Nuclear Panel Rpt (Draft)

When inclosure #1 is withdrawn or not attached, this correspondence will be declassified in accordance with Par 37 h, AFR 205-1.

~~SECRET~~

January 11, 1957

Mr. W. B. Miller
Assistant Chief, Structures Branch
Aircraft Laboratory
Air Research & Development Command
USAF, Wright-Patterson Air Force Base, Ohio

Attn: WCLSS-1

Dear Mr. Miller:

I was able to reach Dr. Teller just as he was leaving town regarding your invitation to attend the discussions scheduled for February 6 - 7, 1957.

Dr. Teller has asked me to extend his regret. His schedule will not permit a trip east on these dates. He would, however, be very happy to meet with you in this area at some future date, if it can be arranged.

Since he spends the majority of his time in Berkeley, it might be easier to arrange a meeting here in his cleared facility at the Laboratory. All of his classified mail is sent to Berkeley now, incidentally, so you may wish to correct your records which apparently show the Livermore site address.

Please let me know if I can be of any assistance in scheduling a meeting. Dr. Teller's telephone number at the Laboratory is THornwall 3-2740, Extension 419.

Very truly yours,

(Mrs.)

Joan Jaffray
Secretary to Edward Teller

*Classified letter from
Miller returned to
SAB*

57 WCLSS-167

UNIVERSITY OF CALIFORNIA

RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

December 15, 1957

Research Directorate
Air Force Special Weapons Center
Kirtland Air Force Base
Albuquerque, New Mexico

Attention: James O. Alderman, Captain, USAF

Gentlemen:

Please excuse the long delay in answering your letter concerning the declassification of AEC TID 228 document.

I see no objection to declassification of this document or similar documents.

Again, I am sorry I have not replied before this, but I have been out of town so much lately, and much of my mail has gotten "buried" in a pile.

Sincerely,

Edward Teller

ET:gg

Get the document

RESEARCH DIRECTORATE
AIR FORCE SPECIAL WEAPONS CENTER
KIRTLAND AIR FORCE BASE
NEW MEXICO

SWRB

20 November 1956

Dr. E. Teller
Radiation Laboratory
University of California
Berkeley, California

Dear Dr. Teller:

Being interested in the role reactors will probably play in the industrial life of this nation, I have for some time concerned myself with the intrinsic problems of reactors. These problems will, as you most vividly pointed out at the Nuclear Panel Meeting last October, which I attended, affect many people. Hence the need for public indoctrination and education. However, to date most discussions in this area have been classified and, consequently, are not useable in this endeavor.

Fortunately, though, some such discussions which took place as long ago as 1948 and 1949 were, even then, classified only Confidential, Restricted Data. One such document is AEC TID 228, which is an extract from notes on a discussion by you, Dr. Teller, and Dr. G. Failla on plant location hazards. This is dated September 1948, with revision in 1949.

I would appreciate your opinion as to how sensitive is the area of interest presented in this document at the present time. Could this document, in your opinion, be completely declassified? If so, I would appreciate it very much if you as the author would take the necessary steps to declassify this document.

Realizing that you are extremely busy, I would greatly appreciate your giving of your time to this matter.

Sincerely yours,

James O. Alderman

JAMES O. ALDERMAN
Captain, USAF

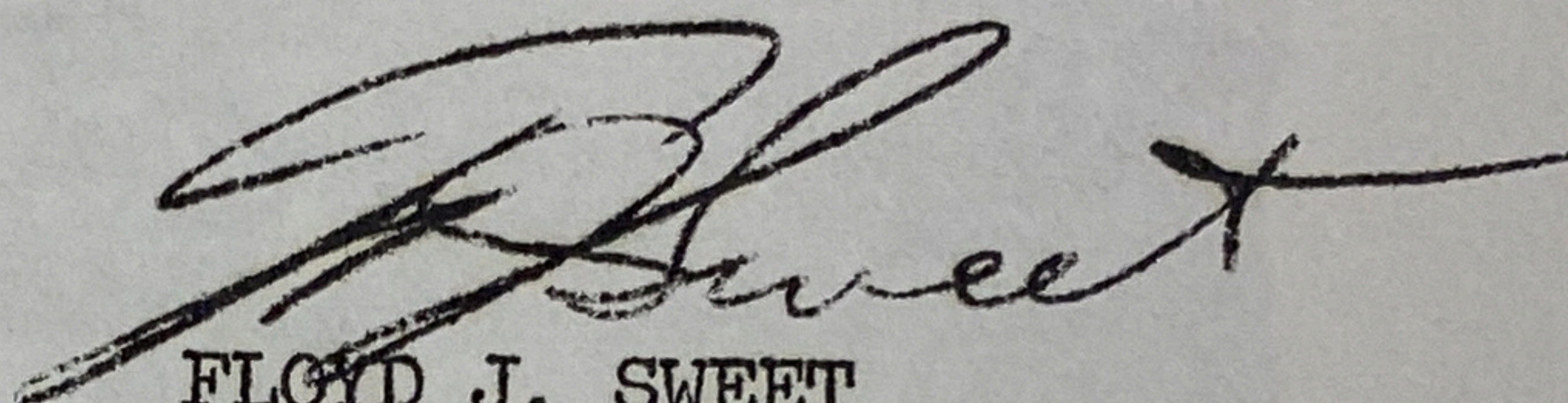
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

5 July 1957

MEMORANDUM TO ATTENDEES, SPRING SCIENTIFIC ADVISORY BOARD MEETING

SUBJECT: Candid Photographs

We thought you might like to add the inclosed photo (s) to your collection. They were taken during the reception at the recent Patrick Air Force Base Meeting of the Board.



FLOYD J. SWEET
Lt. Colonel, USAF
Secretary
Scientific Advisory Board
Office of the Chief of Staff

PATRICK THEATER



Photographic Branch
AIR FORCE MISSILE TEST CENTER
Patrick Air Force Base, Florida

This Photograph to be used for
Reproduction by Proper Authority **ONLY**

Credit Line to Read

U. S. AIR FORCE PHOTOGRAPH

Neg. # 9-1763 Date _____

NOTE PAPER

UNIVERSITY OF CALIFORNIA

RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

June 19, 1957

Lt. Col. Floyd J. Sweet
Secretary, Scientific Advisory Board
Office of the Chief of Staff
Department of the Air Force
Headquarters, United States Air Force
Washington 25, D. C.

Dear Colonel Sweet:

Please find enclosed \$2.00 from Dr. Teller to reimburse your office for the transportation furnished from the airport to hotel and return at Nassau.

Sincerely yours,

(Miss) Genevieve Greteman
Secretary to Edward Teller

Enc.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

13 June 1957

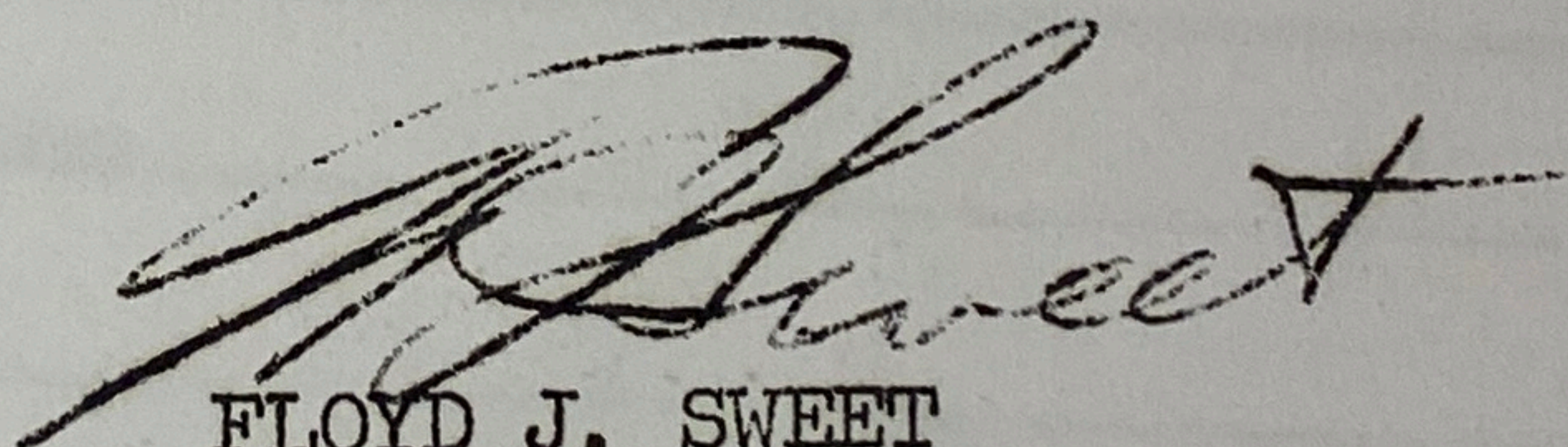
MEMORANDUM TO MEMBERS OF THE NASSAU EXPEDITION

SUBJECT: Transportation Expense

1. The mystery of the transportation furnished from airport to hotel and return at Nassau has come to light. It appears that Mr. Wanamaker, the American Consul had arranged for the transportation to be added to your hotel bills. However, the transportation company did not submit their billing in time for this to be accomplished.

2. We have anted up to Mr. Wanamaker for the bill submitted to him. In order to reimburse our office it is requested that each participant in the Nassau expedition slip a \$2.00 bill or its equivalent in an envelope and mail to the Secretariat.

3. Your prompt attention to this matter would be most appreciated



FLOYD J. SWEET
Lt. Colonel, USAF
Secretary
Scientific Advisory Board
Office of the Chief of Staff

Capt. F. S. Attinger
Dr. J. G. Baker
Mr. Harold Brown
Mrs. Edna Brown
Dr. Ivan A. Getting
Mr. Robert R. Gilruth
Lt. Col. B. C. Gray
Mrs. Adelia M. Letchworth
Maj. M. P. Maier
Mr. J. C. Mark
Dr. C. W. Miller
Dr. C. B. Millikan
Miss Norma Jean Mogus
Dr. George Schairer
Dr. Edward Teller
Dr. Clayton S. White
Mr. C. N. Hasert

FTB-56-336

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
Washington 25, D. C.

13 January 1956

MEMORANDUM FOR DR. NORRIS BRADBURY
DR. POL DUWEZ
DR. LOUIS DUYN
DR. DAROL FROMAN
DR. CLARK MILLIKAN
DR. WILLIAM RATTIE
MR. ADDISON ROTHROCK
MR. ABE SILVERSTEIN
PROF. E. TAYLOR
✓ DR. EDWARD TELLER
PROF. JOHN VON NEUMANN
DR. HERBERT YORK
MR. GALE YOUNG
MR. DONOVAN

SUBJECT: Final Report of Ad Hoc Committee on Nuclear Propulsion of
Missiles as Transmitted by Mark Mills, 6 Jan 1956

*Returned
COPH-194 to
Mills*

Could we please have your comments or concurrence on the above report, particularly the summary comments on the crash program, as soon as possible? If we do not hear from you by January 20th, we will assume you concur in the report as it stands.

Chester N. Hasert

CHESTER N. HASERT
Technical Director
Scientific Advisory Board
Office of the Chief of Staff

December 17, 1956

Captain Frank S. Attinger
Assistant Secretary
Scientific Advisory Board
Office of the Chief of Staff
Department of the Air Force
Washington 25, D.C.

Dear Captain Attinger:

I am enclosing a request for reimbursement of expenses incurred in connection with a trip Dr. Edward Teller took to Omaha, Nebraska in October, 1956.

In checking the files I find we neglected to request one of your usual letters of authorization to travel, and I wonder if it will be possible to write one after-the-fact. The stop off at Omaha was on SAB business. I understand that SAB had agreed Dr. Teller was to submit a proposal to General Curtis LeMay of SAC for approval. I'm sure Major Billy Gray will be able to furnish more detail on the subject involved. The stop off was made in connection with a San Francisco-Washington trip, so I am billing only partial transportation expense and one day of per diem.

Please let me know if there will be any difficulties in executing the voucher.

Sincerely yours,

(Mrs.) Joan Jaffray
Administrative Assistant

FOR: Edward Teller

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

July 12, 1956

General James H. Doolittle
Scientific Advisory Board
Department of the Air Force
Washington 25, D. C.

Dear General Doolittle:

This is a note to confirm the telephone conversation which you and I had today.

I raised the question of my chairing a Scientific Advisory Board Panel in connection with the ANP program. I mentioned that Convair is involved in this program, that I am a consultant to General Dynamics, and that Convair is a subsidiary of General Dynamics. I therefore raised the question whether, for this reason, I should exclude myself from the work of the panel on ANP.

You asked me whether I would feel personally embarrassed to participate in the deliberations and whether I feel that I would in any way be influenced by my connections with General Dynamics. I answered that I will not be personally embarrassed, and that I feel quite certain of my overriding interest in having the question settled to the best advantage of the Air Force. Furthermore, my present views tend to agree more with Convair's competitors than with Convair itself. You thereupon advised me that under those conditions I may serve on the panel and that you would want me to serve on the panel.

I shall therefore proceed with the business of considering ANP according to your advice.

Sincerely yours,

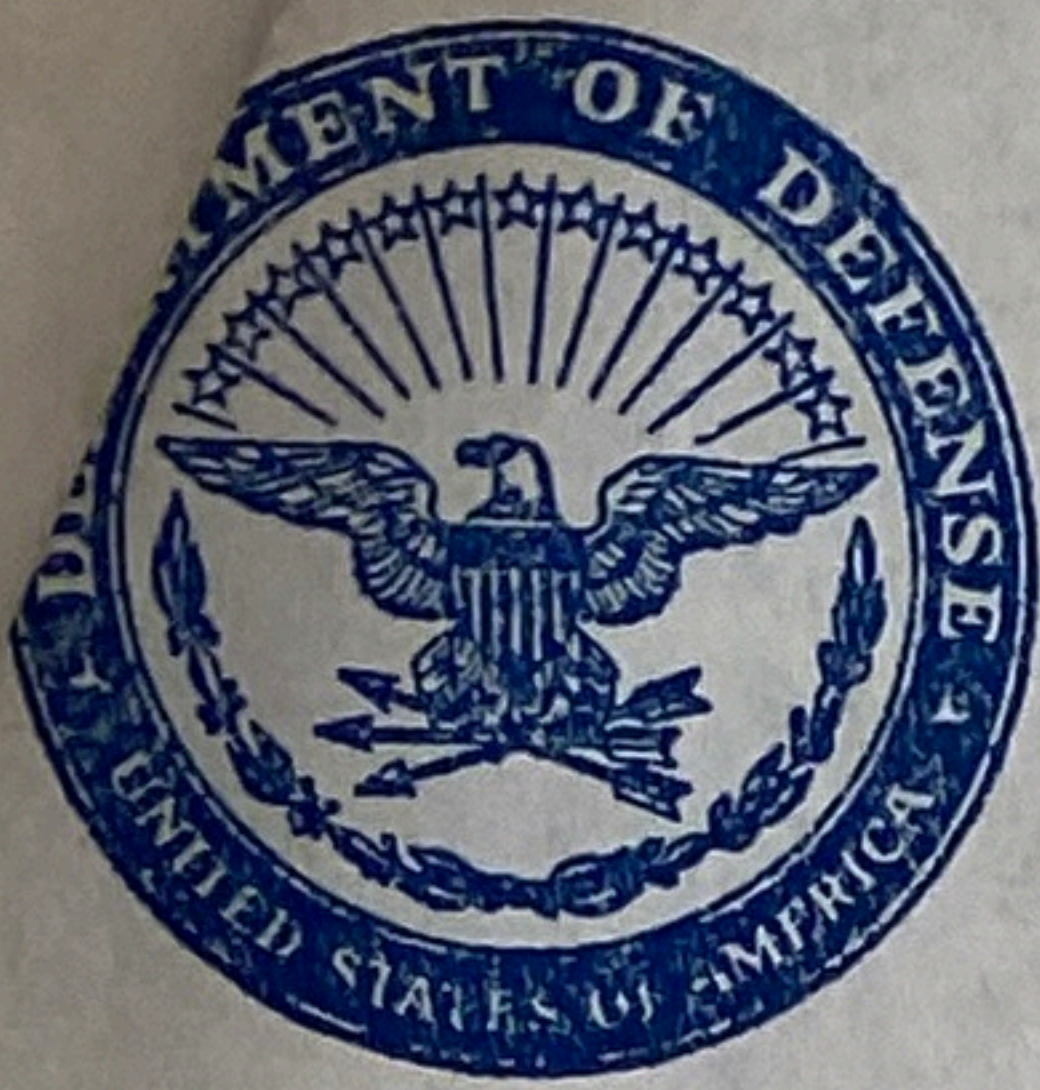
AS EVER,

Edward Teller

J. H. DOOLITTLE
Chairman

Scientific Advisory Board
Office of the Chief of Staff

ET:gg



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

file

August 1, 1956

Dr. Edward Teller
Associate Director
Radiation Laboratory
University of California
Berkeley, California

Dear Dr. Teller:

It was good to talk with you last week. We are all pleased that the Nuclear Panel is in high gear under your able guidance.

Appreciate your willingness to remain as Chairman of the Nuclear Panel during 1957. We want to keep Johnny von Neumann on as long as possible; certainly as long as he is willing to remain. George Kistiakowsky will be rotated off as planned and we will ask Dave Griggs to remain another year. This will create one vacancy to which we will appoint Ernie Plesset as you requested.

Pete Scoville is considering a request to work with the Reconnaissance Panel but will remain as a liaison member of the Nuclear Panel just as Mark Mills is liaison from the Fuels and Propulsion Panel. This will leave you a good sized panel with 8 members, 2 liaison members and 8 consultants. Believe this about recaps our telephone conversation.

Hope to see you in San Diego on the 7th, or at Livermore on the 10th when our group hopes to visit the Radiation Laboratory there.

All the best.

As ever,

J. H. Doolittle
J. H. DOOLITTLE
Chairman

Scientific Advisory Board
Office of the Chief of Staff

*Teller
for files*

22 October 1956

Dr. Edward Teller
Associate Director
Radiation Laboratory
Berkeley 4, California

24 July 1956

L-12452

Dear Dr. Teller:

Dr. Norris Bradbury
Director
Los Alamos Scientific Laboratory
P.O. Box 1663
Los Alamos, New Mexico

With the provisions of your current travel orders, you are authorized to proceed from the above address Dear Norris: Arizona, and return, with variations as may be necessary in order to attend this meeting.

I tried all today to offer an apology. To wit: In my capacity of trying to help Edward Teller keep the Nuclear Panel of the Scientific Advisory Board rolling, I went ahead and arranged the session on ANP for August 13 and 14. Herb York scolded me roundly, deservedly, because I didn't check with him -- and had the poor sense to arrange a direct conflict with his meeting with you.

Any other date would have conflicted with some other members' schedules. But apologies, anyway!

Best regards.

Sincerely,

Ernst H. Plesset

EHP:ER

cc: Edward Teller



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON 25, D. C.

22 October 1956

15 May 1956

Dr. Edward Teller
Associate Director
Radiation Laboratory
Berkeley 4, California

Dear Dr. Teller:

You are invited to attend the Full Board Meeting of the Scientific Advisory Board to be held at the San Marcos Hotel, Chandler, Arizona, on 14-15-16 November 1956.

In accordance with the provisions of your current travel orders, you are authorized to proceed from the above address to Chandler, Arizona, and return, with variations as may be necessary in order to attend this meeting.

Sincerely,

FRANK S. ATTINGER
Captain, USAF
Assistant Secretary
Scientific Advisory Board
Office of the Chief of Staff
Lt. Colonel, USAF
Secretary
Scientific Advisory Board
Office of the Chief of Staff

~~SECRET~~

HOLMES & NARVER, INC.

ENGINEERS · CONSTRUCTORS

828 SOUTH FIGUEROA STREET

LOS ANGELES 17

TRINITY 8201

LOS ANGELES
WASHINGTON, D. C.
HONOLULU, T. H.

"Indexed
Director's Office"

Weapon
ETB376 attachment
destroyed 7/16/65

March 21, 1956

University of California Research Laboratory
Livermore, California

Attention: Dr. Teller

Dear Sir:

You have recently received a letter from the Air Research and Development Command of the United States Air Force, through Western Development Division, advising you that this firm has been retained by the Department of the Air Force to conduct a study into the future test and research facility requirements in connection with the field of vehicles travelling outside the earth's atmosphere. Your name has been advanced as one who can materially aid in the early development of criteria for such facilities.

Enclosed with this letter is a copy of Exhibit "A" submitted to this firm as a general scope for the proposed study. As you can observe, the investigation encompasses many facets of the missile program; in fact it is assumed that Sections 2 and 3 of Exhibit "A" have only touched upon some of the fields of interest. They were composed in order to provide a nucleus about which this study can develop.

It is the purpose of this initial report to establish the general overall future needs of the program. An idea of the type of information desired can be summarized as follows:

- (1) A breakdown of the whole program into a number of specific fields of study. It is recognized that certain fields may overlap each other.
- (2) A list of specific test and research facilities that are required for each field. Again, it is recognized that certain of these facilities may be utilized in one or more fields.

WHEN SEPARATED FROM ENCLOSURES, HANDLE
THIS DOCUMENT AS *Unclassified*

284

~~SECRET~~

~~SECRET~~

University of California
Research Laboratory
Attention: Dr. Teller

March 21, 1956
Page 2

- (3) Rough estimates of the land area requirements as well as cost estimates of each facility.
- (4) Manpower requirements for each facility.
- (5) Unusual utility requirements in the fields of electrical power, water, gas, etc.

It should be re-emphasized that this study is to provide the Department of the Air Force with an overall perspective of the scope and future needs of its guided missile program. It is expected that more detailed investigations will follow concerning specific fields and facilities.

Mr. M. R. Born of Holmes & Narver will telephone within a few days for an appointment with you and/or anyone you believe will be qualified to furnish information or ideas that would be of value in this study.

Very truly yours,

HOLMES & NARVER, INC.

Reuben R. Alvy
Reuben R. Alvy
Project Engineer

RRA:vr
Enclosure

~~SECRET~~